VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a minor, industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et seq. The discharge results from stormwater run-off from an electrical distribution and equipment reconditioning and storage facility. This permit action consists of adding an industrial stormwater outfall, increasing metals monitoring frequency; adding nutrient monitoring; adding and updating special conditions, and re-evaluating monitoring and toxicity testing and frequency. SIC Code: 5063

1.	Facility Name and Address:	Dominion – Materials and Metering Services Center
	Facility Contact Name:	Kenneth Roller
	Title:	Supervisor, Environmental Regulations
	Mailing Address:	5000 Dominion Blvd Glen Allen, VA 23060
	Telephone:	(804) 273-3494
	Email:	kenneth.roller@dom.com
	Location:	4307 Castlewood Road Richmond, VA 23234
2.	Permit Number:	VA0087734
	Permit Expiration Date:	November 17, 2015
3.	Owner Name and Address:	Virginia Electric and Power Company 5000 Dominion Blvd Glen Allen, VA 23060
4.	Application Complete:	May 21, 2015
	Permit Drafted By:	Laura Galli, June 12, 2015
	Permit Reviewed By:	Joseph Bryan, June 18, 2015 Emilee Adamson, August 17, 2015
	Public Comment Period Dates:	October 13, 2015 to November 12, 2015
	Published Dates:	October 12, 2015 and October 19, 2015 in the Richmond Times Dispatch
5.	Receiving Stream Name:	Grindall Creek
	Basin:	James River (Lower)
	Subbasin:	N/A
	Section:	1a
	Class:	III
	Special Standards:	None
	River Mile:	2-GRK002.37
	7-Day, 10-Year Low Flow (7Q10):	0.021 MGD
	1-Day, 10-Year Low Flow (1Q10):	0.018 MGD
	30-Day, 5-Year Low Flow (30Q5):	0.063 MGD
	30-Day, 10-Year Low Flow (30Q10):	0.031 MGD
	7Q10 High Flow:	0.26 MGD
	1Q10 High Flow:	0.22 MGD
	Harmonic Mean Flow (HM):	0.16 MGD
	Tidal?	No
	On 303(d) list?	Yes

6. **Operator License Requirements**: A licensed operator is not required in accordance with 9 VAC 25-790-300.

7. **Reliability Class**: Not Applicable to industrial facilities in accordance with 9 VAC 25-790-70.

8. **Permit Characterization**:

(X) Existing Discharge
(X) Effluent Limited
(X) Industrial
(X) Private
(X) Reissuance
(X) Water Quality Limited
(X) Whole Effluent Toxicity Required

9. **Discharge Description:**

Table 1: Discharge Description

Outfall Number	Discharge Source	Treatment	Maximum Daily Flow
001	Stormwater	Spill Collection system designed to divert and contain oil spills up to 15,000 gallons.	0.65 MG*
002	Stormwater	None	Not Currently Measured

*Maximum reported 30-day flow: reported in June 2011.

See **Attachment A** for Site Map.

The facility extends approximately 36 acres, the majority of which is covered with buildings and asphalt or concrete surfaces. Operations at the facility include storing, repairing, and/or recycling of electrical equipment and associated materials used for the construction, operation and maintenance of Virginia Power's electrical distribution system. The facility property includes three drainage areas. Drainage Area 1 is approximately 21.2 acres and consists of loading/unloading areas, shop buildings, warehouses and indoor and outdoor storage facilities. Runoff in this area is directed to the Spill Collection system by drop inlets located around the yard. In normal operating conditions, stormwater bypasses the containment system and discharges from outfall 001.

Drainage Area 2 is approximately 11.9 acres in size and with the exception of truck ramp B, stormwater leaves the property as sheet flow runoff to Grindall Creek. Truck Ramp B is a channelized discharge to a grassy swale located within the drainage area. Activities and buildings located within Drainage Area 2 include the following: loading/unloading of trucks, vehicle maintenance building, fueling stations, yard office and storage building, PCB storage building, outdoor storage of PCB equipment, drained transformers, oil and oil/water mixtures, and hazardous waste storage area. Activities generating sheet flow discharges from this area do not have sector specific requirements in the stormwater regulations and no problems have been observed from Drainage Area 2 run off. Additionally, the items located within the drainage area are regulated under the materials handling storage special condition of the permit requiring best management practices so as not to create a discharge.

Drainage Area 3 is approximately 3.35 acres in size and includes the meter building, emergency generator fuel tank, and some outdoor storage. During the previous permit cycles, the discharge from Drainage Area 3 had not been included as this area was believed to discharge to the City of Richmond Combined Sewer System (CSS). Based on a map submitted by the City of Richmond Department of Public Utilities in August 2015 (see **Attachment B**), this area drains to an MS4. In accordance with 9VAC 25-151-20 et seq., industrial stormwater that discharges to an MS4 is subject to VPDES regulations, and therefore the discharge from Drainage Area 3 is included in the 2015 permit as outfall 002.

See **Attachment B** for more information on the drainage areas.

10. **Sewage Sludge Use or Disposal**: Not Applicable

11. **Discharge Location Description**:
Coordinates: Latitude Longitude
Outfall 001 37° 27' 55" 77° 25' 55"
Outfall 002
Name of USGS topo map: 099B Drewry's Bluff (See **Attachment A**)

12. **Material Storage**:
Several chemicals are stored on-site but have a limited potential of coming in contact with the discharge streams. Additionally, on site is a Spill Control and Countermeasure (SPCC) containment basin with automatic oil sensors. Under normal conditions, stormwater bypasses the containment systems. However, in the event that oil is detected in the run-off, a valve in the diversion box is automatically opened and flow is directed to the containment basin. More information about the SPCC containment basin is included in **Attachment B**. The facility has certified that none of materials listed on the chemical inventory list are exposed to stormwater under normal operating conditions.

13. **Ambient Water Quality Information**:
Ambient water quality data from Goode Creek at Commerce Road monitoring station 2-GOD000.77 was selected as representative of the receiving stream, Grindall Creek. See **Attachment C** for Flow Frequency Memorandum by Jennifer Palmore, P.G., dated May 22, 2015.

14. **Antidegradation Review & Comments**: Tier 1 **X** Tier 2 _____ Tier 3 _____
The State Water Control Board's Water Quality Standards includes an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect those uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters. The receiving water body (Grindall Creek) is considered a Tier 1 waterbody due to the existence of discharges to the creek where Water Quality Standards are expected to be maintained, at a minimum.

15. **Site Inspection**: Performed by Heather Deihls on September 18, 2012; Site visit performed by Laura Galli on June 10, 2015 (See **Attachment D**).

16. **Effluent Screening & Limitation Development:**

Outfall 001:
Guidance Memo 96-001 recommends that chemical-specific water quality-based limits not be placed on stormwater outfalls at this time because the methodology for developing limits and the proper method of sampling is still a concern and under review/reevaluation by EPA. Exceptions would be where a VPDES permit for a stormwater discharge has been issued that includes effluent limitations (backsliding must be considered before these limitations can be modified) and where there are reliable data, obtained using sound, scientifically defensible procedures, which provide the justification and defense for an effluent limitation. Therefore, in lieu of limitations, pollutants are assessed against screening criteria developed solely to identify those pollutants that should be given special emphasis during development and assessment of the Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP, required by Part I.C.3 of the permit, is designed to reduce pollutants in stormwater runoff. To determine which pollutants are of concern, stormwater effluent data is compared to the more stringent of two times the pollutant's acute water quality criterion as outlined by the *Virginia*

Water Quality Standards (WQS) or the pollutant's benchmark monitoring concentration as contained in DEQ's VPDES General Permit for Stormwater Associated with Industrial Activity and in the VPDES Permit Manual dated March 27, 2014, Section IN4 – Industrial Stormwater Discharges.

Screening criteria for industrial stormwater discharges have been established at two times the acute criteria based on agency procedures. The calculation of two times the acute standard takes into account hardness, receiving stream characteristics, and effluent characteristics and is calculated using the MSTRANTI spreadsheet for wasteload allocations (**Attachment F**). The MSTRANTI Spreadsheet is used only as a tool to calculate two times the acute wasteload allocation (WLAa) for stormwater evaluation. Data regarding flow input into MSTRANTI is not representative of effluent or historical stream flow. This produces a number representing a concentration for each pollutant that may be of concern. If pollutants are discharged at concentrations exceeding this threshold, additional stormwater evaluation and management may be required.

Benchmark pollutants are those pollutants that, due to the nature of the industrial activity or materials stored on the site, have the potential to contribute pollutants to stormwater discharges. While pollutant benchmarks are established based on specific industrial activities, it is assumed that reported concentrations greater than any of the benchmarks warrant being reviewed, regardless of the industrial activity.

A comparison of effluent data to the VAR05 Industrial Stormwater General Permit (ISWGP) benchmarks contained in 9 VAC 25-151-10 et seq. and to acute screening criteria, as applicable, is presented below in Table 2 for Outfall 001. Effluent data collected during the permit cycle and reported on Discharge Monitoring Reports (DMRs) from 2010 to 2015 is included in **Attachment E**. Data not included was reported as believed absent or <QL and was considered absent for the purpose of this evaluation. Data in bold text indicates a concentration above the corresponding benchmark or screening value, with the corresponding screening and/or benchmark value in bold text as well. Parameters reported that exceeded screening criteria are copper and zinc. See the metals discussion below in this section for additional information.

In cases where the reported concentrations exceed either screening criteria or the benchmarks, the permit requires that the permittee implement BMPs for the problem outfalls in accordance with the SWPPP to reduce the pollutant concentrations in the stormwater runoff. The effectiveness of the SWPPP will be evaluated through the required monitoring for all parameters listed in Part I.A of the permit. During the term of the permit, monitoring data demonstrating effluent concentrations that exceed the screening criteria included in the permit will trigger action by the permittee, including review of the SWPPP and BMPs.

Table 2: Stormwater Effluent Evaluation: **Outfall 001**

Parameter	Units	Highest Detected Value 001	Screening Level (2x acute)	Benchmark Value
COD	mg/L	109.12	NA	120
BOD	mg/L	5.60	NA	30
Copper, total recoverable	µg/L	**47**	**13**	NA
Copper, dissolved	µg/L	**35**	**13**	NA
Zinc, total recoverable	µg/L	**467**	**120**	NA
Zinc, dissolved	µg/L	**264**	**120**	NA
TSS	mg/L	54.8	NA	100
pH	S.U.	7.04	NA	6.0-9.0
Total Petroleum Hydrocarbon (TPH)	mg/L	0.60	NA	15
Total Nitrogen	mg/L	1.57	NA	NA
Fluoride	mg/L	0.066	NA	NA

Sulfate	mg/L	8.78	NA	NA
Aluminum, total recoverable	µg/L	478	NA	NA
Barium, total recoverable	µg/L	30.1	NA	NA
Cadmium, dissolved	µg/L	0.4	3.3	NA
Cadmium, total recoverable	µg/L	0.4	3.3	NA
Magnesium, total recoverable	µg/L	1260	NA	NA
Manganese, total recoverable	µg/L	48.2	NA	NA
Iron, total recoverable	µg/L	803	NA	NA

Only pollutants with an applicable wasteload allocation (WLA) and Human Health Standards for surface waters not designated as Public Water Supply were evaluated. Effluent data indicates the presence of iron, barium, and sulfate, however, the receiving stream is not designated as a Public Water Supply. Consequently, no further analyses of these pollutants were performed. Additionally, data submitted with the application also demonstrated the presence of aluminum, magnesium, and manganese; however, no further analysis was performed because there is no Water Quality Standard for these parameters.

Reported values for cadmium, copper, and zinc were compared to two times the acute WLA (screening level). The WLAa for metals is expressed in the dissolved form and not the total recoverable form. Data for cadmium, copper, and zinc were provided in both the dissolved (from application and WET Test Reports from 2010 to 2015) and total forms (DMR data from 2010 to 2015), and both sets of data were used for the comparison to the two times acute WLA. As indicated in Table 2 above, neither total recoverable nor dissolved cadmium exceed the screening level, therefore no additional evaluation for this parameter is required. The maximum reported values over the last permit cycle for both the total recoverable and the dissolved forms of the two metals exceed two times the acute WLA. Therefore, continued monitoring for both parameters is appropriate and based on Permit Writer Judgment (PWJ), which is defined as the best professional judgment of the permit writer to assign limitations and or monitoring requirements protective of water quality that are not explicitly contained in the *Virginia Water Quality Standards* (9 VAC 25-260 et seq.) or federal effluent limit guidelines. Historically, stormwater monitoring requirements for metals have been included in this permit as total recoverable to be consistent with effluent limitations per 9VAC25-31-230.C. However, with this permit reissuance, metals monitoring requirements will be expressed as dissolved to provide a direct comparison to the water quality criteria.

COD, BOD, TSS, pH and TPH were compared to the respective stormwater benchmarks, and none of these parameters exceed the benchmark. Because COD has not exceeded the benchmark value over the last 10 years, monitoring of this parameter will no longer be required. Monitoring requirements for flow, biological oxygen demand (BOD), total suspended solids (TSS), and pH will be carried forward to the 2015 permit on a permit writer judgment basis.

A limitation on TPH was placed in previous permits because the facility stores transformers, and there is a concern over the discharge of transformer oils from the site. Originally, these limits applied to Oil and Grease, however, in the 2005 permit issuance, the limitation was applied to TPH based on engineering judgment that the effluent from this facility is more appropriately characterized with TPH rather than Oil and Grease. The 2005 permit included a monthly sampling frequency for TPH with a monthly average limitation of 15 mg/L and a maximum limitation of 20 mg/L which were carried forward to the 2010 permit. These limitations are carried forward to the 2015 permit, and are applied to this facility on a Permit Writer Judgment (PWJ) basis. The permit also will contain a pH limitation based on Water Quality Standards.

In accordance with section IN-4 of GM14-2003, quarterly monitoring for parameters that exceed the respective screening level is recommended while a continued semiannual monitoring frequency for the other parameters is appropriate.

PCBs: Given the current and historic handling of PCBs at Drainage Area 1, there is reasonable potential for PCBs to be present in the stormwater at Outfall 001 in concentrations that may cause instream exceedances of the standard. A PCB TMDL for the lower James River watershed is currently under development. This site was identified and included in a solicitation effort for voluntary monitoring using low-level PCB method 1668 in 2009. No data has been submitted at this time. Consequently, in accordance with GM09-2001, monitoring will be required with this reissuance. See Special Condition I.B.8 for additional discussion.

Whole Effluent Toxicity (WET): 48-Hour Static Acute Test using Ceriodaphnia dubia and Pimephales promelas – Outfall 001:

A summary of the WET test results for the 2010-2015 permit cycle is provided in **Attachment G**. Test results show toxicity during the 2011, 2012 and 2015 sampling events for both species. While concentrations for total recoverable copper and zinc have been above the respective screening criterion (13 µg/L for copper and 120 µg/L for zinc) during the 2013 and 2014 sampling events, no toxicity was reported. The 2015 sampling event showed concentrations of both total copper and total zinc above the respective screening criterion, and toxicity was reported for both species. During a site visit dated June 10, 2015 (see **Attachment D** for site visit memo), DEQ personnel performed a walkthrough of the site to identify potential sources of copper and zinc in the stormwater. The walkthrough did not identify any specific areas as the site is kept well organized and clean. The facility has used crushed limestone around two stormwater inlets for the 2013, 2014 and 2015 sampling events, and confirmed that more limestone will be added at the same inlets, and will continue to be used as part of the stormwater BMPs implemented at the site. However, in light of the toxicity reported during the 2015 sampling event, and in order to fully monitor the effects and efficacy of the limestone in the metals concentrations and potentially higher toxicity of the effluent, semiannual WET testing using both species is included for the next permit cycle on a PWJ basis. Monitoring for dissolved copper and zinc will be required for this permit reissuance to provide a direct comparison with water quality criteria. A Stormwater Management Evaluation special condition, to include WET Screening, is also included in the 2015 permit in accordance with GM14-2003.

Outfall 002:
No information on the stormwater discharge from Drainage Area 3 is available. Monitoring only for flow, pH, TSS and nutrients for the discharge at Outfall 002 are appropriate (see Table 4 for the rationales for each parameter) and are added to the permit as Part I.A.2. However, in order to fully characterize the discharge from this area, a special condition to fulfill Form 2F requirements is added to the 2015 permit.

Nutrient Monitoring for Nonsignificant Nutrient Dischargers – Outfalls 001 and 002:
In accordance with GM14-2011, individual VPDES permits for industrial stormwater should include semi-annual nutrient monitoring for the first two years of the permit for a total of four samples. The purpose of this monitoring is to establish standard nutrient monitoring conditions in individual VPDES permits in order to develop data necessary to reevaluate the Virginia point source wasteload allocations (WLAs) included in the Chesapeake Bay TMDL.

Table 3: Monitoring and Limitations for Outfalls 001

Parameter	Basis for Limits	Discharge Limits			Monitoring Requirements	
		Monthly Average	Min	Max	Frequency	Sample Type
Flow (MG)	NA	NA	NA	NL	1 per 6 Months	Estimate
pH (S.U.)	1	NA	6.0	9.0	1 per 6 Months	Grab

Parameter	Basis for Limits	Discharge Limits			Monitoring Requirements	
		Monthly Average	Min	Max	Frequency	Sample Type
Total Suspended Solids (TSS) (mg/L)	2	NA	NA	NL	1 per 6 Months	Grab
Copper, Dissolved (µg/L)	3	NA	NA	NL	1 per 3 Months	Grab
Zinc, Dissolved (µg/L)	3	NA	NA	NL	1 per 3 Months	Grab
Total Petroleum Hydrocarbons (TPH) (mg/L)	3	15	NA	20	1 per 6 Months	Grab
Total Phosphorus (TP) (mg/L)	4	NA	NA	NL	1 per 6 Months	Grab
Total Kjeldahl Nitrogen (TKN) (mg/L)	4	NA	NA	NL	1 per 6 Months	Grab
Nitrite + Nitrate	4	NA	NA	NL	1 per 6 Months	Grab
Total Nitrogen (TN) (mg/L)	4	NA	NA	NL	1 per 6 Months	Calculated

NL = No Limitation; NA = Not Applicable.
1 = Water Quality Standards (9 VAC 25-260)
2 = Sector Specific Benchmark monitoring requirement (9VAC 25-151)
3 = Permit Writer Judgment (PWJ)
4= PWJ - Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorus (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay as per GM14-2011. Monitoring of TN and TP is required semiannually for two consecutive years for industrial stormwater in order to verify the aggregate wasteload allocations

Table 4: Monitoring and Limitations for Outfalls 002

Parameter	Basis for Limits	Discharge Limits			Monitoring Requirements	
		Monthly Average	Min	Max	Frequency	Sample Type
Flow (MG)	NA	NA	NA	NL	1 per 6 Months	Estimate
pH (S.U.)	1	NA	6.0	9.0	1 per 6 Months	Grab
Total Suspended Solids (TSS) (mg/L)	2	NA	NA	NL	1 per 6 Months	Grab
Total Petroleum Hydrocarbons (TPH) (mg/L)	3	NA	NA	NL	1 per 6 Months	Grab
Total Phosphorus (TP) (mg/L)	4	NA	NA	NL	1 per 6 Months	Grab
Total Kjeldahl Nitrogen (TKN) (mg/L)	4	NA	NA	NL	1 per 6 Months	Grab
Nitrite + Nitrate	4	NA	NA	NL	1 per 6 Months	Grab
Total Nitrogen (TN) (mg/L)	4	NA	NA	NL	1 per 6 Months	Calculated

NL = No Limitation; NA = Not Applicable.
1 = Water Quality Standards (9 VAC 25-260)
2 = Sector Specific Benchmark monitoring requirement (9VAC 25-151)
3 = Permit Writer Judgment (PWJ)

4= PWJ - Nonsignificant dischargers are subject to aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorus (TP) and Sediments under the Total Maximum Daily Load (TMDL) for Chesapeake Bay as per GM14-2011. Monitoring of TN and TP is required semiannually for two consecutive years for industrial stormwater in order to verify the aggregate wasteload allocations

17. **Antibacksliding:** All limitations in the proposed permit are the same or more stringent than the limitations in the 2010 permit.

18. **Special Conditions:**

I.B.1 **Operation and Maintenance Manual Requirement**
Rationale: Required by Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9 VAC 25-31-190 E, and 40 CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this.

I.B.2 **Materials Handling and Storage**
Rationale: 9 VAC 25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia § 62.1-44.16 and 62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

I.B.3 **Compliance Reporting**
Rationale: Authorized by VPDES Permit Regulation, 9 VAC 25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

I.B.4 **Total Maximum Daily Load (TMDL) / Nutrient Reopener**
Rationale: Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed it they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

9 VAC 25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. 9 VAC 25-31-390.A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

I.B.5 **Facility Closure Plan**
Rationale: This condition establishes the requirement to submit a closure plan for the treatment works if the treatment facility is being replaced or is expected to close. This is necessary to ensure industrial sites and treatment works are properly closed so that the risk of untreated waste water discharge, spills, leaks and exposure to raw materials is eliminated and water quality maintained. Section 62.1-44.21 requires every owner to furnish when requested plans, specification, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposed of the State Water Control Law.

I.B.6 **Water Quality Criteria Reopener**

Rationale: VPDES Permit Regulation, 9VAC25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of the water quality standards.

I.B.7 **Industrial Concept Engineering Report (CER)**

Rationale: §62.1-44.16 of the Code of Virginia requires industrial facilities to obtain DEQ approval for proposed discharges of industrial wastewater. A CER means a document setting forth preliminary concepts or basic information for the design of industrial wastewater treatment facilities and the supporting calculations for sizing the treatment operations.

I.B.8 **Low Level PCB Sampling**

Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. To ensure that water quality standards are maintained, the permittee is required to analyze the facility's effluent for the substances noted. The monitoring was included in accordance with GM09-2001.

I.B.9 **Sampling to Fulfill Form 2F Requirements**

Rationale: In some cases, applicants may not have been able to comply with the Form 2F stormwater sampling requirements due to the lack of a representative storm event. This special condition requires the permittee to sample and submit data from a storm event to fulfill the requirements of Form 2F.

I.C.1-4 **Stormwater Management Evaluation; General Stormwater Special Conditions; Stormwater Pollution Prevention Plan; and Benchmark Monitoring**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of stormwater from industrial activity. 9 VAC 25-31-120 requires a permit for these discharges. The Stormwater Management Evaluation, General Stormwater Special Conditions, Stormwater Pollution Prevention Plan requirements, and Benchmark Monitoring requirements of the permit are derived from the VPDES general permit for discharges of stormwater associated with industrial activity (VAR05), 9 VAC 25-151-10 et seq. VPDES Permit Regulation, 9 VAC 25-31-220 K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numerical effluent limits are infeasible or the practices are necessary to achieve effluent limits or to carry out the purpose and intent of the Clean Water Act and State Water Control Law. General stormwater requirements, SWPPP requirements, and monitoring requirements have been included in accordance with the GM14-2003 Permit Manual Section IN-4 and in accordance with the VAR05 Industrial Stormwater General Permit (9 VAC 25-151-10 et seq.).

I.C.5 **Facilities in the Chesapeake Bay Watershed**

Rationale: Nonsignificant dischargers are subject to aggregate wasteload allocations for TN, TP, and sediments under the TMDL for Chesapeake Bay. Monitoring of TN and TP is required in the VPDES general permit for discharges of stormwater associated with industrial activity (VAR05), 9 VAC 25-151-10 in order to verify the aggregate wasteload allocations.

I.C.6 **Discharges Through a Regulated MS4 to Waters Subject to the Chesapeake Bay TMDL**

Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of stormwater from industrial activity. 9 VAC 25-31-120 requires a permit for these discharges. The Discharges Through a Regulated MS4 to Waters Subject to the Chesapeake Bay TMDL requirements of the permit are derived from the VPDES general permit for discharges of stormwater associated with industrial activity (VAR05), 9 VAC 25-151-10 et seq.

I.C.7 **Expansion of Facilities That Discharge to Waters Subject to the Chesapeake Bay TMDL**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-10 defines discharges of stormwater from industrial activity. 9 VAC 25-31-120 requires a permit for these discharges. The Expansion of Facilities That Discharge to Waters Subject to the Chesapeake Bay TMDL requirements of the permit are derived from the VPDES general permit for discharges of stormwater associated with industrial activity (VAR05), 9 VAC 25-151-10 et seq.

Part II **Conditions Applicable to All Permits**
Rationale: VPDES Permit Regulation, 9 VAC 25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

19. **NPDES Permit Rating Work Sheet:** Total Score 30, See **Attachment H**.

20. **Changes to the permit:**

Cover Page: Water Permit Manager title updated to Planning and VPDES Permit Manager

PARAMETER		DISCHARGE LIMITS		MONITORING REQUIREMENTS		RATIONALE
From	**To**	**From**	**To**	**From**	**To**	
Part I.A.1 (Outfall 001)						
Total Recoverable Copper	Dissolved Copper	No Change	No Change	1 per 6 Months	1 per 3 Months	Monitored data above screening criteria indicate that this remains a pollutant of concern (See Fact Sheet item 16). Monitoring requirement changed to dissolved copper to provide direct comparison to water quality criteria. Quarterly monitoring recommended per GM14-2003.
Total Recoverable Zinc	Dissolved Zinc	No Change	No Change	1 per 6 Months	1 per 3 Months	Monitored data above screening criteria indicate that this remains a pollutant of concern (See Fact Sheet item 16). Monitoring requirement changed to dissolved zinc to provide direct comparison to water quality criteria Quarterly monitoring recommended per GM14-2003.
Chemical Oxygen Demand		NL	--	1 per 6 Months	--	Monitoring requirements removed based on last 10 years of concentrations below the benchmark.
Total Kjeldahl Nitrogen		--	NL	--	1 per 6 Months	Updated in accordance with monitoring requirements of 9VAC25-151 ISWGP 2014 Regulations.
Nitrite+Nitrate		--	NL	--	1 per 6 Months	Updated in accordance with monitoring requirements of 9VAC25-151 ISWGP 2014 Regulations.

Total Nitrogen, Total Phosphorus	--	NL	--	1 per 6 Months	Updated in accordance with monitoring requirements of 9VAC25-151 ISWGP 2014 Regulations.

NL = No Limitation NA = Not Applicable

---2015 Part I.A.1. footnote 3: Added the monitoring period for semiannual and quarterly monitoring to clarify monitoring expectations as specified in 9VAC25-151.
---2015 Part I.A.1. footnote 4: Added to specify testing methods requirements for TPH.
---2015 Part I.A.1. footnote 5: Added to reference permit section for quantification levels and reporting instructions.
---2015 Part I.A.1. footnote 6: Added to specify monitoring requirements for Total Phosphorus and Total Nitrogen.
---2015 Part I.A.1 footnote 7: Added to define Total Nitrogen.
---2015 Part I.A.4.: Modified to include reference to additional WET testing monitoring requirements.

Added Part I.A.2 (Outfall 002)	**RATIONALE**
	Monitoring Requirements added for Outfall 002. Semiannual monitoring recommended per GM14-2003.

Part I Special Condition Changes:

From	To	Rationale
I.B.1	**--**	Notification Levels special condition deleted as this condition refers to process wastewater discharges per 9VAC25-31-200A.
I.B.2	I.B.1	Operation and Maintenance Manual Requirement: Reflects revisions consistent with GM14-2003 and in accordance with owner's comments as addressed in Attachment K.
I.B.3	I.B.2	Materials Handling/Storage: Relabeled following deletion of Notification Levels special condition.
I.B.4	I.B.3	Compliance Reporting: language updated to match GM14-2003. Monitored only parameters are not included in this section. Quantification Levels selected based on GM14-2003 protocol.
I.B.5	I.B.4	TMDL / Nutrient Reopener: expanded to include the Nutrient Reopeners (GM07-2008 Amendment 2).
I.B.6	I.B.5	Facility Closure: revised in accordance with GM14-2003.
I.B.7	--	Water Quality Criteria Monitoring: deleted as the permittee has complied with this special condition.
I.B.8	I.B.6	Water Quality Criteria Reopener: relabeled.
--	I.B.7	Concept Engineering Report: special condition added as it applies all industrial permits in accordance with GM14-2003.
--	I.B.8	Low Level PCB Sampling: added in accordance with GM09-2001 because of the PCB management on site. Includes owner's comments as addressed in Attachment K).
--	I.B.9	Added in accordance with GM14-2003 to characterize the discharge at Outfall 002.
Part I.C.1 through I.C.3	Part I.C.1 through I.C.3	Stormwater Management Evaluation, General Stormwater Special Conditions and Stormwater Pollution Prevention Plan requirements revised in accordance with GM14-2003. Added references to Part I.A.2. Pollutant Specific Screening changed from total recoverable copper and total recoverable zinc to dissolved copper and dissolved zinc. WET testing monitoring requirements changed from total recoverable copper and total recoverable zinc to dissolved copper and dissolved zinc. Monitoring frequency changed from annual to semiannual based on PWJ. Included owner's comments as addressed in Attachment K.
--	Part I.C.4	Benchmark Monitoring: Special condition added in accordance with GM14-2003.
--	Part I.C.5	Added in accordance with the ISWGP, 9VAC25-151-10 et seq.
--	Part I.C.6	Added in accordance with the ISWGP, 9VAC25-151-10 et seq.

--	Part I.C.7	Added in accordance with the ISWGP, 9VAC25-151-10 et seq.
Part II Condition Changes:		
Part II.	Part II.	Updated in accordance with GM14-2003 boilerplate language.

21. **Variances/Alternate Limits or Conditions:** None

22. **Public Notice Information required by 9 VAC 25-31-280 B:**

Comment period: Publishing Newspaper: *Richmond Times Dispatch*
Publication Dates: October 16, 2015 and October 23, 2015
Start Date: October 16, 2015 End Date: November 16, 2015

All pertinent information is on file and may be inspected or copied by contacting Laura Galli at:

Virginia Department of Environmental Quality (DEQ)
Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060-6296

Telephone Number 804/527-5095
Facsimile Number 804/527-5106
Email laura.galli@deq.virginia.gov

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ Piedmont Regional Office by appointment.

23. **303(d) Listed Segments (TMDL):** The receiving stream is a tributary to the James River. The receiving stream was assessed as a Category 2B waters in the 2012 and draft 2014 305(b)/303(d) Water Quality Integrated Water Assessments Report. A Category 2B water indicates waters are of concern to the state but no Water Quality Standard exists for a specific pollutant, or the water exceeds a state screening value or toxicity test. The Fish Consumption Use was assessed as fully supporting with observed effects due to a VDH advisory for kepone and due to PCBs in the water column. No limit for kepone is included in this permit because this parameter is believed absent in the facility's discharge, and therefore does not contribute to the impairment. Because the facility manages PCBs on site, low-level sampling of PCBs is required with this reissuance, and the need for a Pollutant Management Plan may be assessed based on the data collected. The Aquatic Life and Wildlife Uses were fully supporting. The Recreation Use was not assessed.

The discharge was included in the James River and Tributaries – City of Richmond Bacterial TMDL, which was approved by the EPA on 11/4/2010 and by the SWCB on 6/29/2012. The discharge was

modeled but was not assigned an E. coli wasteload allocation because it is not permitted for fecal bacteria control.

The facility discharges to Grindall Creek in the Chesapeake Bay watershed (upper James River tidal freshwater estuary, JMSTF2). The receiving stream has been addressed in the Chesapeake Bay TMDL, which was approved by the EPA on December 29, 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a, and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tidal tributaries by establishing non-point source load allocations (LAs) and point-source waste load allocations (WLAs) for Total Nitrogen (TN), Total Phosphorus (TP) and Total Suspended Solids (TSS) to meet applicable Virginia Water Quality Standards contained in 9VAC25-260-185.

Implementation of the Chesapeake Bay TDML is currently accomplished in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP), approved by EPA on December 29, 2010. The approved WIP recognizes the "General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia" (9VAC25-820) as controlling the nutrient allocations for non-significant Chesapeake Bay dischargers. The approved WIP states that for non-significant Municipal and Industrial facilities, nutrient WLAs are to be consistent with Code of Virginia procedures, which set baseline WLAs to 2005 permitted design capacity nutrient load levels. In accordance with the WIP, TN and TP WLAs for non-significant facilities are considered aggregate allocations and will not be included in individual permits. The WIP also considers TSS WLAs for non-significant facilities to be aggregate allocations, but TSS limits are to be included in individual VPDES permits in conformance with the technology-based requirements of the Clean Water Act. However, the WIP recognizes that so long as the aggregated TSS permitted loads for all dischargers is less than the aggregated TSS load in the WIP, the individual permit will be consistent with the TMDL.

40 CFR 122.44(d)(1)(vii)(B) requires permits to be written with effluent limits necessary to meet water quality standards and to be consistent with the assumptions and requirements of applicable WLAs. This facility is classified as a Non-significant Chesapeake Bay discharger because it has a permitted design capacity flow, or equivalent load, of less than 500,000 gallons per day into non-tidal waters. This facility has not made application for a new or expanded discharge since 2005. It is therefore covered by rule under the 9VAC25-820 regulation. In accordance with the WIP, TN and TP load limits are not included in this individual permit, but are consistent with the TMDL because the current nutrient loads are in conformance with the facility's 2005 permitted design capacity loads.

The stormwater discharge managed through this permit is considered part of the aggregated wasteload allocations for regulated stormwater discharges. The stormwater outfall covered by this permit is not subject to the technology-based TSS requirement of the Clean Water Act; therefore, technology-based TSS limitations are not required. As the TSS and nutrient content of stormwater discharges authorized by this permit are provided for in aggregated loads under the TMDL, the discharges are in conformance with the TMDL.

24. **Additional Comments:**

Previous Board Action: None.

Staff Comments:

a. *Testing Waiver*: In a letter dated December 4, 2014, the permittee requested a waiver for the testing of Total Recoverable Chlorine (TRC), fecals, sulfite and dioxin, citing that no industrial activities contribute to these parameters and they are believed absent. See **Attachment I** for the Testing Waiver Request and DEQ approval.

b. *Monitoring Frequency Reduction:* A reduction in monitoring frequency was not considered for this permit reissuance due to the intermittent nature of the permittee's discharge and recommended monitoring frequencies for industrial stormwater included in GM14-2003.

VDH Comments: The Virginia Department of Health East Central Field Office, Office of Drinking Water does not have any objections to the facility's discharge. See Memo dated June 2, 2015 in **Attachment J**.

Public Comments: TBD

Owner Comments: See **Attachment K**.

Fees: Annual maintenance fees are up to date, last paid September 26, 2014.

Controversial Project / Permit? No.

E-DMR Participation: The facility is enrolled in E-DMR. Enrollment date: 3/07/2011.

Virginia Environmental Excellence Program (VEEP): The facility is not enrolled in VEEP.

Planning Conformance Statement: The discharge is in conformance with the existing planning documents for the area.

Local Government Notification of Public Notice: Local government officials were notified of the public comment period on October 15, 2015. In accordance with the Code of Virginia, §62.1-44.15:01, the following individuals received the notification: The City of Richmond Mayor, the President of the Richmond City Council, and the Richmond Regional Planning District Commission (RRPDC).

25. **Summary of attachments to this Fact Sheet:**

Attachment A	Site and Stormwater Drainage Areas Maps
Attachment B	Drainage Areas Description
Attachment C	Flow Frequency Memorandum
Attachment D	Site Inspection and Site Visit
Attachment E	Ambient Monitoring and Effluent Data
Attachment F	MSTRANTI Data Source and Spreadsheet
Attachment G	WET Tests results
Attachment H	NPDES Industrial Permit Rating Worksheet
Attachment I	Testing Waiver Request and Approval
Attachment J	VDH Coordination Response
Attachment K	Owner Comments
Attachment L	TBD